

„Latvia’s 5th Solar Cup 2012”

„Saules kauss V”

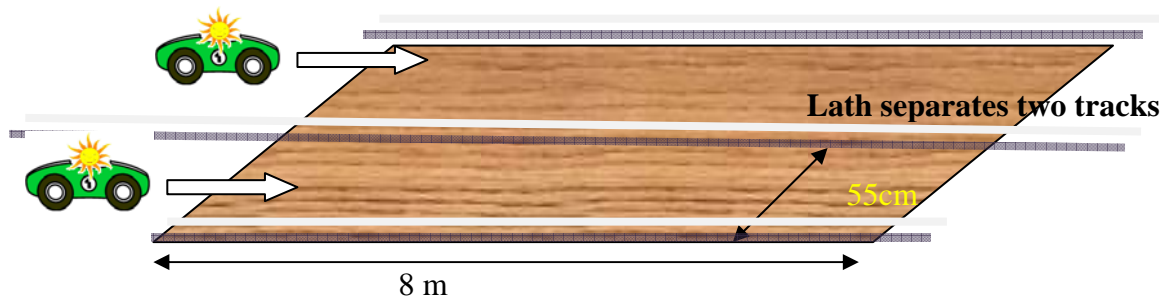
Description of Tracks and organization of Competition

May 19, 2012, 9:00 – 16:00

The Place: Car Parking place of Institute of Solid State Physics, University of Latvia: Latvia, Riga, Kengaraga Street 8 www.cfi.lu.lv

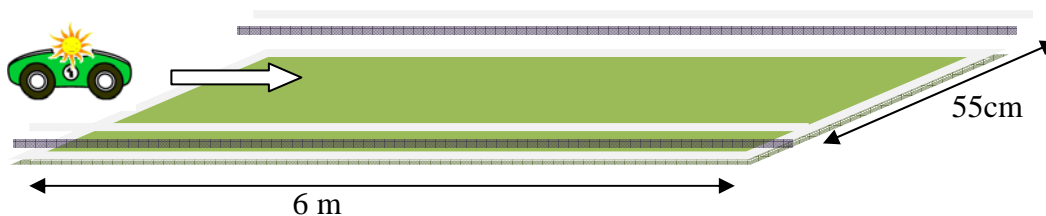
Speed Track:

Orientation – from North to South; laminate surface 8 m long, 0,5 m wide (from 6 standard floor sheets); wood laths bounded both sides of track:



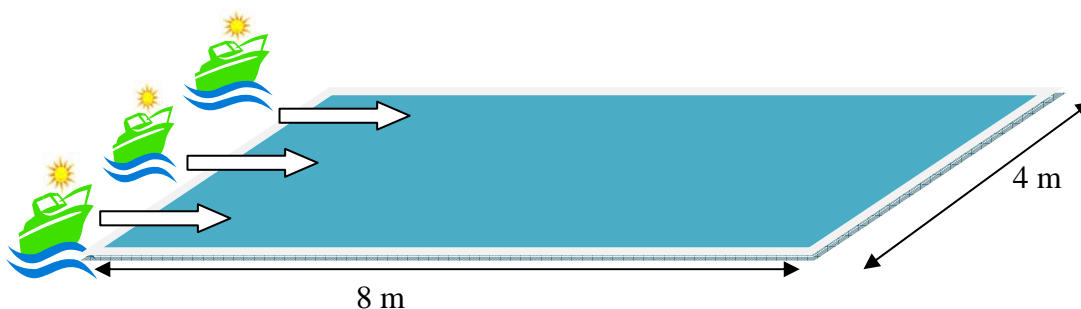
The Force Trace:

Orientation – from North to South; artificial grass surface (wires 2 cm high) 6 m long and 50 cm wide with 2-3 humps (10-20 cm high); both sides of Trace are bounded with vertical wood laths:



The Water Trace:

Orientation – from Southwest to Northeast; the pool (artificial river) with film inlay and deepness 100 cm, length 8 m and the width 4 m. If the problem will arise with reciprocal motion, the Sun boat needs a couple of hooks – one in the bow and second – in the tail, to use a string:



The Trace for radio-controlled cars:

With colored crayons track is depicted on the asphalt, - width - 75 cm; length - up to 8 meters; form – closed loop like as figure 8.

The Air Trace:

The orientation is free. Possible variants depending on the ability of participating models (will be evaluated just before the competition):

- a) The Sun plane starts vertically - the time is fixed when defined height is reached (6-8 meters);
- b) The Sun plane needs the runway – it will be arranged directly on place.

The process of Start and Competition:

- 🏆 The Sun vehicle (boat) is laid on the Start just before the start line with covered Sun panels (from distance).
- 🏆 After starting signal the cover is removed;
- 🏆 If vehicle (boat) does not begin to move, it can be pushed slightly with one finger;
- 🏆 The time is fixed between two events - when the front of vehicle is crossing the start line and when the tail of vehicle is crossing the finish line.

Dividing the Sun vehicles and Sun boats:

- 🏆 The Judges team is dividing the vehicles and boats in classes:
 - **A – Folk Class:** the vehicle or boat is using Solar panels with active area not exceeding 125 cm² and does not use electronics;
 - **B – Master Class:** The tuning of Solar Panels is made (concentrators etc.) or electronics is used to store Solar energy (before competition the stored energy must be discharged);
 - **C – Extra Class:** The active area of Solar panels exceeds 125 cm², hydrogen is used to store the solar energy and more extras);
- 🏆 The competition takes place sequentially – Folk Class, Master Class, and Extra Class starting with Speed Trace, then Force Trace, then Water Trace and finishing with Air Trace. During the time when the tracks are not used for competition they can be used for trial experiments;
- 🏆 Two drives will be allowed for every vehicle (boat, plane), and the best results will be judged;
- 🏆 Awards will be for the best 3 places in all Tracks and Classes.